

High Mountain Dams in Bonneville Unit,
Crystal Lake Dam
Wasatch National Forest
0.8 miles west of Trial Lake Campground
Kamas vicinity
Summit County
Utah

HAER No. UT-41-B

HAER
UTAH
22-KAM.V
1-B-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park Service
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80537

HISTORIC AMERICAN ENGINEERING RECORD

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High Mountain Dams in Bonneville Unit, Crystal Lake Dam

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Location: 0.8 miles west of Trial Lake Campground, Wasatch National Forest
Kamas vicinity, Summit County, Utah

UTM: 12.502820.4503260
Quad: Mirror Lake

Date of Construction: 1916

Builder/Designer: Provo Reservoir Company and the Sego Irrigation Company, Provo, Utah
Wasatch Irrigation Company and the Timpanogos Irrigation Company,
Heber City, Utah

Present Owner: Union Reservoir Company, Heber City, Utah 84032

Original Use: Dam

Present Use: Dam

Significance: The small dam on Crystal Lake is predated only by those on Wall, Washington and Trial lakes in the Bonneville Unit. A typical earth-fill structure, the dam is presently among the most deteriorated in the unit. Its physical integrity has been compromised somewhat by the installation of a new headgate.

Inventoried by: Clayton Fraser and James Jurale
Fraserdesign
Loveland, Colorado

October 16, 1985

HISTORICAL INFORMATION

In May 1914, the National Forest Service granted permission to the Provo Reservoir Company and the Sego Irrigation Company of Provo, Utah, and the Wasatch Irrigation Company and the Timpanogos Irrigation Company of Heber City, Utah, to dam several lakes at the headwaters of the North Fork of the Provo River for irrigation. Of the lakes approved for modification -- Crystal, Wall, Trial, Washington and Star -- Crystal was the smallest and shallowest. It was also the fourth on which a dam was completed in 1916. The dam was a small-scale, earth-fill structure, 70 feet long and only 6 feet high, placed across the lake's outlet on its eastern edge. A gated outlet pipe was embedded in its center, and a concrete overflow spillway was poured at its northern end. The dam was breached in the 1950s. In 1982, a new headgate was installed and the dam refaced with stone riprap. It is proposed that the existing breach be widened and the spillway deepened to return the lake to its natural level.

ARCHITECTURAL INFORMATION

Dam length: 70 feet
Dam height: 6 feet
Dam width: 12 feet
Construct: Earth fill dam with rock riprap facing; no lakeshore protective works
Lake size: 9.8 acres; 45 acre-foot maximum capacity; 3 vertical feet maximum drawdown
Outlet: Gated pipe (destroyed in breaching); concrete spillway

BIOGRAPHICAL INFORMATION

"Preliminary Engineering Report: Stabilization of High Mountain Lakes, Provo River Drainage," National Park Service Report, 1969, page 11.

Crystal Lake Reservoir File (#16-D), Kamas Ranger Station, Wasatch National Forest, Kamas, Utah.

Field inspection by Clayton Fraser and Robert Righter, July 25, 1985.

For additional information, see Irrigation Canals in the Uinta Basin, IIAER No. UT-30.

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